

Enhancing Language and Literacy Education for High School Students in an Inclusive Environment through Design-Based Research

Introduction

General Background

The number of students with disabilities who are educated in general education classrooms has increased significantly in the last few years (McLeskey, Henry, & Hodges, 1998). National and international legislative acts have demanded fair and equal access of all children to education. Some of the initiatives include the Convention on the Rights of Persons with Disabilities of the United Nations (2008), the Individuals with Disabilities Education Improvement Act of 2004 (IDEA), the No Child Left Behind Act of 2001 (NCLB), Section 504 of the Rehabilitation Act of 1973, and the National Educational Technology Plan (U.S. Dept. of Education, 2010).

Inclusion is about educating all children together regardless of their level of ability, background, or status (McLeskey, Rosenberg, & Westling, 2013). Apart from students with disabilities, other students that might need support to succeed are those from diverse cultural or linguistic backgrounds, students at risk, and gifted and talented learners (McLeskey, et al., 2013).

Purpose of the study

The purpose of this study is to use DBR to enhance language and literacy education for high school students during Tier 1 instruction in a Response to Intervention (RTI) model.

Research questions:

1. How can teachers address the needs of diverse learners for language and literacy education in grades 9 through 12?
2. How can frameworks such as Universal Design for Learning (UDL) facilitate inclusion during Tier 1 instruction in a RTI model?
3. What is the role of emerging technologies in the development of design principles for learning and instruction in an inclusive environment?

Significance of the Study

When an inclusion program is well designed, students with and without disabilities benefit socially and academically (Carter & Hughes, 2006; Dore, Dion, Wagner, & Brunet, 2002). Some have argued that too much emphasis has been placed on facilitating access of students with disabilities to their neighborhood schools and too little emphasis on improving students' outcomes (McLeskey & Waldron, 2011). In order for inclusion programs to be effective, they have to be carefully designed and monitored (McLeskey et al., 2013). Design-Based Research (DBR) can collaborate with practitioners to address the needs of diverse students and enhance inclusive learning environments.

Review of Related Literature

Reviewing the literature will be a continual process since DBR is characterized by iterative cycles of design, enactment, analysis, and redesign (DBR Collective, 2003). Every intervention and redesign will be supported by existing theories and principles. A computerized

search of the literature on UDL and inclusive high schools was carried out by using ERIC and PsycINFO databases. The initial framework that will inform this research proposal is Universal Design for Learning (UDL). This approach to the curriculum design provides principles and guidelines to make instruction more accessible. Students should be provided multiple means of representation, expression and engagement in order to minimize barriers to learning (CAST, 2011). There are indications that UDL may enhance the delivery of evidence-based practices, particularly during Tier-1 instruction in a Response to Intervention (RTI) framework (Basham, Israel, Graden, Poth, & Winston, 2010; Edyburn, 2009).

In general, high school teachers and students reported positive attitudes toward inclusion when appropriate resources and professional support were provided (Ernst & Rogers, 2009; Short & Martin, 2005). However, teachers with higher levels of special education training or experience in teaching students with disabilities were more willing to adopt inclusion (Van Reusen, Shoho, & Barker, 2001). High schools students with and without disabilities have shown high levels of satisfaction, engagement and participation in learning environments that incorporated UDL principles (Abell, Jung, & Taylor, 2011; Dore, Dion, Wagner, & Brunet, 2002; Kortering, McClannon, & Braziel, 2008).

A remarkable intervention was the use of digital backpacks to support diverse learners in a project-based learning environment (Basham, Meyer, & Perry, 2010). Another good example of redesigning the high-school curriculum was provided by Dymond and her colleagues (2006). These researchers used a participatory action research approach to create a universally designed inclusive science course. Participants included one general education teacher, and two special education teachers in an inclusive high school in the Midwest. This study indicated that collaborative research among researchers and practitioners was possible and could yield meaningful results (Dymond, et al., 2006).

Research Methods

DBR can be defined as “a series of approaches, with the intent of producing new theories, artifacts, and practices that account for and potentially impact learning and teaching in naturalistic settings” (Barab & Squire, 2004 p. 2). This DBR project will use quantitative and qualitative methods to collect data and yield a theoretical perspective or design framework that can inform the work of others (McKenney & Reeves, 2013; Wang & Hannafin, 2005).

Participants. An invitation to participate in this study will be sent out to inclusive high schools in Georgia. Participants will be a diverse group of students along with general, and special education teachers in language and literacy education in grades 9 through 12. Students range in age from 14 to 19. There will be both males and females.

Research design. The design for this research proposal has been outlined according to the main four phases of DBR (Herrington, McKenney, Reeves, & Oliver, 2007; Reeves, 2006):
a) Analysis of practical problems by the researcher and practitioners in collaboration,
b) development of solutions informed by existing design principles and technological innovations, c) iterative cycles of testing and refinement of solutions in practice, and d) reflection to produce design principles and enhance solution implementation.

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